

# Technical Data Sheet

## Oligo Hamster Anti-Mouse CD30

### Product Information

Material Number:	940445
Size:	25 Tests
Clone:	mCD30.1 (also known as 2SH12-5F-2D)
Alternative Name:	Cd30; Tnfrsf8; Ki; Ki--1; CD30L Receptor
Reactivity:	Mouse (Tested in Development)
Isotype:	Armenian Hamster IgG1, $\kappa$
Immunogen:	Mouse CD30-mouse IgG1 fusion protein
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	GAGGAGTGAGGTCGGATGGTGCTTAATTAGTTCTGT
SeqID:	AMM2221
Volume Per Test:	2 $\mu$ l
Entrez Gene ID:	21941
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

### Description

The mCD30.1 monoclonal antibody specifically recognizes CD30. CD30 is also known as Tumor necrosis factor receptor superfamily, member 8 (Tnfrsf8). The CD30 molecule is predominantly expressed by activated T lymphocytes, with its expression peaking at day 4-5 on spleen cells activated with plate-bound anti-CD3e antibody. The mCD30.1 antibody reacts with a majority of CD8+ T cells, as well as some CD4+ T cells in these cultures. Expression of CD30 on activated T lymphocytes is regulated by CD28 and cytokines. Its TNF-superfamily ligand, CD30L or CD153, is also expressed on activated T lymphocytes. By northern blot analysis, mouse Cd30 mRNA is detected in the thymus and in 72-hour pokeweed mitogen- and Con A-activated spleen cells, but not in the lung, brain, kidney, liver, bone marrow, unactivated spleen, or 72-hour LPS-activated splenocytes.<sup>1</sup> It has also been reported that CD30 is expressed on naive B lymphocytes, it is not detectable after activation, and it starts to return after 72 hours following activation. Reports suggest that signaling through the CD30 molecule may be important in cytokine production by CD8+ CTL lines and may play a role in the regulation of Th1 and Th2 cytokine secretion by CD4+ and CD8+ T cells. It has also been proposed that CD30 plays an important role in the negative selection of thymocytes and protects against autoimmunity. Members of the TNFR family and their ligands are involved in the induction of diverse biological responses in lymphocytes, including differentiation, proliferation, and cellular death. In humans, CD30 was initially identified in Hodgkin and Reed-Sternberg cells in Hodgkin's disease patients and subsequently was found on neoplastic cells of certain types of non-Hodgkin's lymphomas.

### Application Notes

The antibody was conjugated to an oligonucleotide that contains an antibody clone-specific barcode (ABC) flanked by a poly-A tail on the 3' end and a PCR handle (PCR primer binding site) on the 5' end. The ABC for this antibody was designed to be used with other BD AbSeq oligonucleotides conjugated to other antibodies. All AbSeq ABC sequences were selected in silico to be unique from human and mouse genomes, have low predicted secondary structure, and have high Hamming distance within the BD AbSeq portfolio, to allow for sequencing error correction and unique mapping. The poly-A tail of the oligonucleotide allows the ABC to be captured by the BD Rhapsody™ system. The 5' PCR handle allows for efficient sequencing library generation for Illumina sequencing platforms.

NOTE: The BD Rhapsody Single-Cell Analysis System must be used with the BD Rhapsody Express Instrument.

### Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography and conjugated to BD AbSeq oligonucleotide under optimal conditions.

### Recommended Assay Procedure

Put all BD AbSeq Reagents to be pooled into a Latch Rack for 500  $\mu$ L Tubes (Thermo Fisher Scientific Cat. No. 4900). Arrange the tubes so that they can be easily uncapped and re-capped with an 8-Channel Screw Cap Tube Capper (Thermo Fisher Scientific Cat. No. 4105MAT) and the reagents aliquoted with a multi-channel pipette.

BD AbSeq tubes should be centrifuged for  $\geq 30$  seconds at  $400 \times g$  to ensure removal of any content in the cap/tube threads prior to the first opening.

## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
633701	Single-Cell Analysis System	1 Each	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

## Product Notices

1. This reagent has been pre-diluted for use at the recommended volume per test. Typical use is  $2 \mu\text{l}$  for  $1 \times 10^6$  cells in a  $200\text{-}\mu\text{l}$  staining reaction.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
5. Illumina is a trademark of Illumina, Inc.
6. This product is covered by one or more of the following patents: US 8,835,358; US 9,290,808; US 9,290,809; US 9,315,857; US 9,567,645; US 9,567,646; US 9,598,736; US 9,708,659; and US 9,816,137. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
7. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
8. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at [http://www.bdbiosciences.com/documents/hamster\\_chart\\_11x17.pdf](http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf).
9. Please refer to [bd.com/genomics-resources](http://bd.com/genomics-resources) for technical protocols.

## References

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